NOTE OF INTENT
Warrant-e

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The Current Issue

On 1 January 2016, the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development, adopted by world leaders in September 2015, officially came into force. One of the goals defined focuses on **Responsible Production and Consumption**. With material consumption increasing, it aims at "doing more and better with less" or in other words, increasing welfare gains by reducing resource use, degradation and pollution along the whole life cycle of a product. As of today, the material footprint of nations is increasing, driven in part by the problem of planned obsolescence which consists in the artificial boost of the economy by producing unsustainable goods and services that in turn raise the frequency of purchase.

Companies are at the forefront of this issue as they tend to design products that are not repairable. They manufacture goods that are voluntarily different from other brands in order to limit the possibilities of easy repair and prevent from sharing systems with other devices. Apple for example is guilty of doing so with their phone chargers. Moreover, they maintain high repair costs by limiting spare parts. They also further contribute to the dilemma by setting up marketing strategies to push consumers to buy new products that are supposedly more efficient and fashionable.

A quick look at statistics shows how problematic the situation has become. In 44% of cases, consumers keep an electronic device less than 3 years old, and 61% of cases under 5 years old. It is even worse for household appliances where in 45% of cases, it is kept less than 5 years while it is estimated that they should last about 10 years. Only 15% of washing machines last that long. According to a Supreka-Ademe study, 90% of appliances failures occur between 2 years and 5 years, which is not so coincidently at the end of the given warranty.

Yet worryingly, the search for constant economic growth in a context of mass consumption is not compatible with the fossil resources of our planet. The consequences of overconsumption in the long term is environmentally unsustainable. With planned obsolescence becoming a major issue, we must rethink our consumptions patterns. Because what is at stake is the relationship between the use of objects by consumers and the planet. At present, overconsumption induced by planned obsolescence is both harmful for the environment while ironically not satisfying consumers. We can distinguish several issues.

The Ecological issue : problems induced by planned obsolescence are getting worse. A 2015 German study revealed that the percentage of white goods (large pieces of household equipment such as refrigerators and washing machines) being replaced by consumers within just five years owing to technical defects increased noticeably between 2004 and 2012 - from 3.5% to 8.3%. A Canadian study by the Equiterre association also showed that in 2016, circa 45 million tons of electrical and electronic equipment are thrown away. That could climb by 17% by 2021. This is the equivalent of almost 4,500 Eiffel towers. On average, a household throws away items 10 times more than 100 years ago. Specifically in France, between 17 and 23 kg of electric and electronic waste is produced each year by inhabitants. The consequences of overconsumption and production are serious. In 2015/2016, EU member states were responsible for around 77% of used electric and electronic equipment imported into Nigeria, where huge landfills appeared.

The Social issue : consumers are increasingly frustrated. They invest significant amounts of savings in products that are unsustainable which becomes very costly in the long term. Moreover, they lose autonomy over their tools as products are often not repairable and can't be easily opened to recover spare parts.

The Individual issue: consumer habits need to be changed. A study shows that in 20% of cases, one is separated from a technological object for psychological reasons.

However, there is hope. The phenomenon is gaining attention and political actions are emerging to regulate the issue of planned obsolescence :

The French Act (2015). In France, planned obsolescence is now an offense punishable by two years' imprisonment with a fine of € 300,000 (or up to 5% of the company's average annual turnover on French territory).

The Hamon Law (2014). The compliance guarantee for new entrants initially set at 6 months has been extended to 2 years.

The Roadmap for the Circular Economy (2018). This document deals with 50 measures that the State undertakes to promote circular economy, which is composed of 4 parts: better production, better consumption, better waste management and mobilization of stakeholders. Some companies have already emerged as players in the circular economy : Maximum (a furniture manufacturer startup that draws its material from industrial waste), Patagonia, Zippo, Le Creuset...

On the societal side, there are other types of initiatives such as associative initiatives : NGOs or "HOP" (Halte à l'Obsolescence Programmée) which create advertising campaigns, events, conferences, public debates, pedagogy with children in school and encourage business start-ups that promote sustainable and repairable products.

All of these current initiatives show the possibility of entering a virtuous circle. That's why we asked the question : **How can consumers encourage a more responsible production and reduce technological waste in a culture of mass production and consumption ?** We believe that there lacks an actor that allows to reduce consumption patterns and provide consumption knowledge to consumers while guiding them in their purchasing choices. With Warrant-e, we want to take advantage of this opportunity.

Our Concept

In light of the Hamon law, warranties were put at the forefront of the topic of sustainable production and planned obsolescence. However, despite having said warranties upon purchases, more often than not consumers end up not using them when their item breaks and prefer buying a new product as replacement. The main explanation for this behaviour, is the lack of easy storage. Because warranties are often printed documents people tend to lose them, forget where they placed them or simply fail to remember that they exist. This problem caught are attention and is the main driver for our concept :

Warrant-e is a free mobile application that stores all the consumers' product warranties and provides a user-review platform where said products are rated for sustainability to encourage more informed purchases.

How does it work? After downloading the free application and upon first use, users will be asked to create their profiles. They will need to answer a few questions to determine the type of consumer they are (do they use their products a lot? are they careful with their products? do they protect their products etc.). Once the profile is created users can start uploading their warranties. To do so they will be required to take a photo of the warranty with their phone. In addition to saving the photo, the application uses OCR text recognition to guide consumers through creating their warranty entry. Users will need to select the category they want their product to be stored under (Home appliances, Technology, Sport/Leisure etc.). To finish, the users will be asked to confirm their entry.

What distinguishes Warrant-e is that it offers more functionalities to enjoy than simply the storing of warranties. The application contains several extra features including :

- A reminder will be automatically set to warn users 1 month prior that their warranty is coming to an end. Saved warranties will also appear in the application as being either still valid, close to expiration date or already expired.
- A system that simplifies steps to follow in case the consumer's product breaks. As such, the application will provide a link to the after sale service, contact information of people to reach, guidelines etc. After having indicated the problem, the application will provide hints as to what might cause the defect and specify what the consumer's rights are and what his warranty provides or in other words if the defect is covered or not.
- A follow-up on customer satisfaction. Customers will be asked to fill in a short series of questions when their warranty comes to an end and every 6 months after that until the product dies to assess the quality and sustainability of said product and their overall satisfaction with it. Products are thus rated by consumers and the application creates an aggregate rating for the product and the brand. These ratings and reviews will be made visible to all the

application users. When researching a product the application will subsequently put forward products with a higher rating to incentivize more sustainable consumption.
- A shop button. Since it is not in our interest to see people buy products without seeking information from Warrant-e beforehand, while browsing the recommendations of our catalogue of products, users will be able to either buy or obtain more information concerning any product by clicking on the link provided on the application, next to the very product of interest.

The application is offered for free download to encourage people to use it and not have price be an obstacle. This gives the application significantly more reach potential. However, Warrant-e is not a non-profit business founded by the government. In order to maintain our activity, we will sell the data collected (either raw or analyzed) through the application to firms in the consumer goods industry. Our application enables us to collect a variety of data that can be of great interest to leading companies such as, consumer opinion of brands related to their age, sex and consumer type and product breaks are also inventoried. Firms could also use the data to see how they fair against their competitors (Why did a consumer decide to purchase a Samsung phone after his iPhone broke ? Because the batterie lasts longer and the screen doesn't break easily etc.) in order to improve their products.

Expected Positive Impacts

We believe this mobile application, in addition to raising awareness in regards to planned obsolescence, will bring about several benefits for both consumers and producers. The first one being monetary. By using Warrant-e, consumers are going to be able to save more money as they will be notified when their warranties are about to expire and will be informed on their rights regarding repairs. As such, they will have more incentive to keep owned products instead of buying to replace or renew. We believe that gaining awareness on rights and information will lead to a better understanding of how to optimize repairs and in the long run reduce e-waste. Secondly, our solution takes into consideration the well-being of our clients. Thanks to a thorough analysis of the customer experience of Warrant-e and an intuitive interface, users will now be able to avoid the general hassles and problems of warranties such as accessing documents as easily as possible whilst saving time. In addition to that, our proposal takes into account the environmental issues and challenges we face today. Given that Warrant-e is a digital mobile application, this means that our users will be able to go paperless. Also, assuming the application proves to be successful, it could lead, in the long run, to companies opting for digital copies instead of paper form and them sending the copies directly to the app. Furthermore, we believe that Warrant-e will give rise to a more responsible consumption and production of goods, which in turn will reduce technological waste. Finally, we suspect our application will force companies to increase the duration of their warranties in order to remain competitive, which could then result in longer product life expectancy.

In addition to these consumer benefits, producers will also be able to gain knowledge from the user-generated feedback collected through the application. Warrant-e will sell data resources to companies that will in turn be able to adapt their offers and better cater to the needs of consumers. With sustainable production becoming a central topic, firms need to start becoming more transparent regarding the life cycle of their products. Warrant-e can help increase the brand image of companies that are actively improving the quality and duration of said products. Because we include the possibility to purchase products, companies can also benefit from high conversion rates from the application it is therefore in their best interest to support it.

Major Risks and Actions to Reduce them

The team has evaluated several problems which will need to be addressed to ensure the success of our application. First of all, we fear that companies will welcome Warrant-e with hostility and more specifically, decide to boycott the application. In order to remedy this predicament, it is crucial to establish proper partnerships with leading companies by clarifying the "what's in it for them?" and emphasizing the potential use of collected data : provided we have the user's consent to

ensure transparency, our extensive database will enable us to carry out analyses and ultimately produce reports which could be highly beneficial for these companies. Indeed, these sold reports, or raw data could give them indications regarding their own products. For instance, they will have access to the listing of their most recommended products, customer satisfaction etc. We believe these tools could serve as major strategic insights for these companies. Secondly, we quickly touched upon user consent but this actually refers to a broader issue of legal nature, more precisely the GDPR, the European data regulation which is in effect since May 2018. To counter this problem, we will have to be careful to comply with user rights. We need to ensure that our terms and conditions will be accessible to all, simplified and transparent.

One of the more evident, yet considerable challenge involves consumers. We will not be able to meet our financial and strategic goals if the number of users on Warrant-e is too low and the use of the application simply doesn't catch on. We can tackle this risk by implementing a strong communication and marketing strategy, creating a user friendly product (feedback recovered during pre-launch tests will be key to determine the interface of the application) and highlighting brand values to generate real commitment. Speaking of which, our values revolve around ecology (finding environmentally-friendly solutions for healthier living) and a customer centric offer by having consumers' best interests at heart. Moreover, if the ratings and recommendations made by consumers are not justified or fair, then this could seriously damage the application's credibility. To prevent this and encourage fair behaviour, we will have to develop a pedagogic approach with users and clearly explain our mission and the enhanced role they each play individually. In cases where this fails and users are not providing honest and rational reviews, we will be forced to impose disciplinary measures such as freezing the user's account or even banning them from the application. Furthermore, to hold more credibility and in an effort to appear impartial, ratings will also have to take into consideration several variables such as the way people treat their devices.

Deployment Strategy and Major Milestones

After forming the team, the first major step will be to establish the viability of our business. It is crucial to take the time to provide proof-of-concept to isolate technical issues and define overall direction. This will be done through several focus groups where will we provide a pilot Warrant-e application to participants to gather their feedback. Sequencing these focus groups will enable us to modify the application over time and therefore test adapted versions. Once this is done we will be able to fully dive into the business development.

There will be several key steps in implementing Warrant-e, notably : finding a suitable developer/UX designer, uniting a community around fighting planned obsolescence, securing a server to treat collected data, call on business angels (to help finance and also open network for partnership prospection), set up data offer (analysed or raw data packages sold) establish partnerships with key companies, launching the application on different operating systems (App store) and maintaining the application.

The team strongly believes that communication needs to precede the launch of the application. For it to be a success, we need to unite a strongly committed community that will become the early adopters of Warrant-e. To do so it is important to use social media but we can also seek the sponsorship of recognised businesses that deal with the problem of sustainability such as Yuka or Too Good To Go. We should also look to be present at major events or conferences that discuss sustainable development goals for visibility but also because it aligns with our values and mission statement.

Return on Investment Analysis

Being a digital start-up that doesn't manufacture goods, Warrant-e will have relatively low initial costs. However there will be important costs tied to the development of the application. Notably cost of wages for : a developer/UX designer, a data analyst, a communication manager, a partnership manager, an accountant and a lawyer. In addition, there will be costs of charges which include : initial rent of a server in order to reduce the costs of maintenance and security (if the app

works we can buy one in the long run), purchasing references in the Appstore and Android market, office space rent and purchase of brand name and domain name. There will also be marketing costs linked to communication campaigns.

As mentioned earlier, Warrant-e is not a nonprofit business. To be profitable, we will sell our collected data to firms (either raw or analyzed by a data scientist). We will also offer affiliate links for the purchase of sustainable products.

To justify the business, the team has established a provisional financial analysis covering the first 3 years of operation. Please refer to the appendix to view the costs breakdown and revenues breakdown. Upon this work we believe that Warrant-e will reach financial equilibrium 2,5 years after its launch.

Organization

As a diverse group of students that are also daily consumers, we can already leverage the variety of skills that we bring forward. However, none of us possess the specialized digital expertise required to develop an app or the very specific legal implications of data collection. Therefore, we would need to surround ourselves with a qualified application developer and seek legal advice. It will also be important to clearly define the roles of each individual moving forward so that progress is somewhat structured and of course discuss if some want to part ways with the project or if everyone remains involved.

Being confronted to the problem ourselves we have intuitions as to what would work but we are not building on any previous success and are unknown to the public (no brand recognition as of yet). It is therefore important to broaden our network and reach out to key players on the topic. As discussed prior, that can be done through Business Angels (who would inject the necessary finances to launch the business) but also through meaningful sponsorship (Yuka, Too Good To Go) that can make us benefit from their existing communities. To go a step further, once the application is launched, it would be important to gain the support of NGO's like HOP and the Government to assert more credibility and help with the prospection of partnerships with leading companies of the consumer goods industry.

Main References

United Nation Sustainable Development Goals Knowledge Platform website :
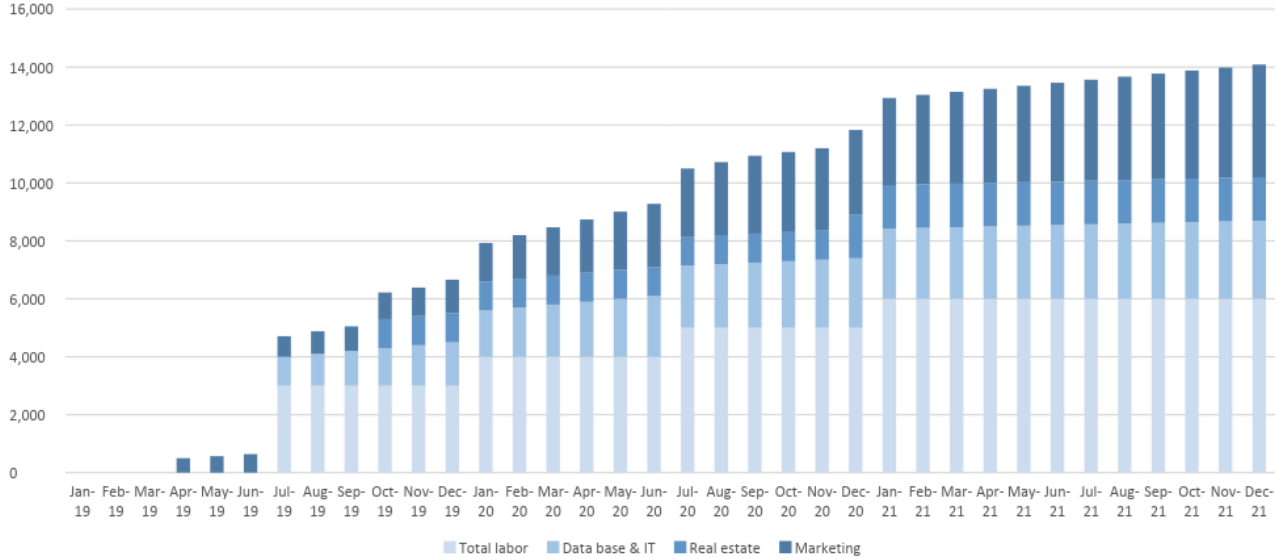https://sustainabledevelopment.un.org/sdg12

European Parliament, May 2016 "Planned obsolescence : exploring the issue"
http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/581999/EPRS_BRI(2016)581999_EN.pdf

Halte à l'Obsolescence Programmée, "Le Gouvernement favorise-t-il un allongement de la durée de vie de nos produits ? " https://www.halteobsolescence.org/le-gouvernement-favorise-t-il-un-allongement-de-la-duree-de-vie-de-nos-produits/
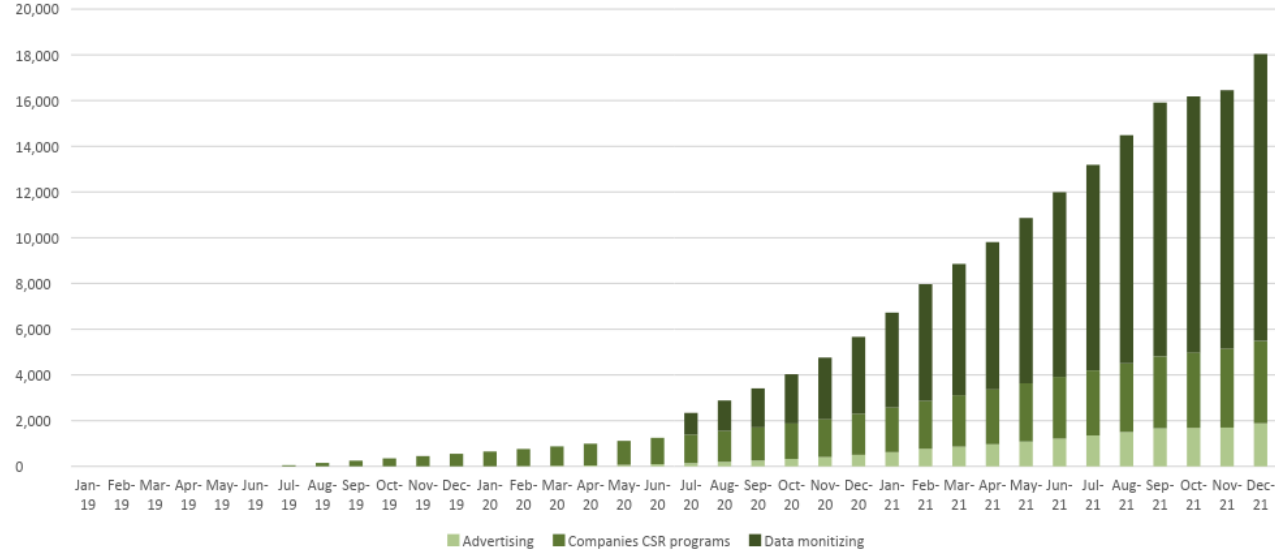
Halte à l'Obsolescence Programmée, "Une nouvelle étude sur l'obsolescence au Canada" https://www.halteobsolescence.org/une-nouvelle-etude-sur-lobsolescence-au-canada/

Appendix

Costs breakdown

Legend: Total labor, Data base & IT, Real estate, Marketing

Revenue breakdown

Legend: Advertising, Companies CSR programs, Data monitizing

Financial equilibrium will be reached 2.5 years after the launch

Legend: Total Costs, Total Revenues, P&L